

Applicant : Jürgen Wienk et al.
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Attorney's Docket No.: 12758-
028001 / 1998P02873WOUS

--BACKGROUND--;

Please replace the paragraphs beginning at page 4, line 15 and continuing to page 7, line 22 with the following rewritten paragraphs:

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SUMMARY

The invention is based on transmitting digital user information structured in bit groups in accordance with a protocol which is designed for another bit group structure.

An aspect of the invention can be seen in the fact that the user information is structured into first bit groups of in each case 2^N bits, that transmission according to the protocol takes place in two bit groups of in each case 2^M bits, M being greater than N, that in each case up to 2^{M-N} successive first bit groups are combined to form a second bit group, and that the first bit groups combined to form second bit groups are transmitted in accordance with the protocol. The invention can be seen in that the first bit groups can be transmitted here by means of the protocol. A further advantage consists in that optimum utilization of the transmission capacity of a connection existing in accordance with the protocol can be achieved since 2^{M-N} combined first bit groups produce exactly one second bit group of 2^M bits, that is to say each bit of the second bit group is used.

According to an embodiment of the invention, it is provided that the second bit groups are transmitted with the aid of ATM cells. As a result, the method according to the invention can be advantageously used in a modern ATM subnetwork. A further advantage is that less ATM cells are required for transmitting the voice information and thus the transmission capacity for transmitting further information can be increased.

According to a further development of the invention, it is provided that the protocol is designed in accordance with International ITU-T Standard I.363.1. The user information inserted into the ATM cells in accordance with the method according to the invention can be advantageously supplied to the communication facilities of the most manufacturers which are already using the I.363.1 Standard. As a further advantage, the time requirements applicable to the transmission of voice information are also guaranteed by the control characteristics of the control information inserted into the information sections of the ATM cells in accordance with the AAL1 protocol.

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According to an alternative embodiment of the invention, it is provided that the second bit groups are transmitted with the aid of Internet packets. This is associated with the advantage that the invention can be used in a modern Internet subnetwork. By suitably designing the lengths of the Internet packets, an optimized time division between the processing time and the preparation time for processing Internet packets can also be found in the communication facilities.

According to a further development of the invention, it is provided that the first bit groups, before being combined into the second bit groups, are transmitted in accordance with a further protocol. This is associated with the advantage that the user information can be supplied to a first subnetwork in which the protocol is used, via at least one second subnetwork, a proven transmission technology being used, for example, in the second subnetwork and a more modern transmission technology being used in the first subnetwork. Thus, hybrid subnetworks can be combined to form one communication network.

According to an embodiment of the invention, it is provided that a second bit group transmitted in accordance with the protocol is divided into the original, up to 2^{M-N} first bit groups, successive. By this means, the original user information is advantageously recovered after a transmission in accordance with the protocol.

According to a further development of the invention, it is provided that the original first bit groups, after distribution from the second bit groups, are transmitted in accordance with an additional protocol. As a result, the user information, after having been transmitted in the first subnetwork in which the protocol is used, can be advantageously transmitted further via at least one third subnetwork, where, for example, a radio-oriented transmission technology is used in the third subnetwork and a circuit-oriented transmission technology is used in the first subnetwork. Thus, hybrid communication networks can be set up, for example ATM systems can be combined with GSM systems.

According to a further development of the invention, it is provided that the second bit groups transmitted in accordance with the protocol are transmitted in accordance with the additional protocol. During this process, the user information inserted in the second bit groups is advantageously inserted directly, i.e. without removing the original user information from the second bit groups, into the third protocol; this enables faster conversion to the third protocol.